



MISSOURI DEPARTMENT OF TRANSPORTATION
8000 Gallon Heated Liquid Emulsion Asphalt Tank

Minimum Specifications

A. Equipment: 8000 Gallon Heated Liquid Emulsion Asphalt Storage Tank

- Minimum 8000 Gallon Vertical Design Tank
- Minimum 7 gauge steel side construction and minimum 1/4" steel bottom. All seams shall be double welded. Tank shall be and pressure tested and certified. Tank bottom shall be drop cone design for solid retention. Tank shall have one side mount manhole access. One 2" (two inch) overflow tube shall be installed and piped to the ground. Tank shall include one (1) 3" NPT threaded gate valve at tank outlet.
- 4" insulation (minimum R-13 insulation required).
- Tank shall be complete with minimum 10-gauge steel secondary containment shell with 2" monitor pipe and leak detection gauge. **Tanks requiring secondary containment shall not be accepted.**
- A steel access ladder with cage, top of tank toe guard and safety rail shall be provided.
- A top mount manhole with either a hinged or bolted design.
- Tank shall be supported by steel beam legs at a minimum height of 5(five) feet from bottom of tank to concrete pad.
- Side mount dial style temperature gauge.
- A 3-inch ID, 12 foot long loading hose shall be provided with tank.
- Heating System: Heater system shall consist of replaceable thermostatically controlled electric heating elements with a minimum of 6000 watts and 220 volts. Heating elements shall be removable without draining tank or removing tank cover. All electrical components and controls shall be enclosed in weather tight boxes, provided by tank manufacturer. MoDOT will supply a certified electrician and electrical power to tank controls.
- Agitator system: Top mounted, worm gear drive electric motor, single phase, 110 or 220 volt, HP size to be based on mixer size. Agitator system shall be controlled by an electric time clock with battery backup (for maintaining clock and time settings in case of power outages-battery will not be used for operating agitator motor). Agitator system shall have a visible light that illuminates when agitator is on. A low temperature sensor shall be provided to prevent agitator from operating if the asphalt is cold. A low level sensor shall be provided to prevent the agitator from operating if the asphalt level is low.
- Unloading Pump: A 3" pipe size- 50-gallon per minute, single or 3 phase motor, loading pump shall be provided for use for loading MoDOT Trucks. Pump shall include vibration isolation stainless steel flex connectors that are designed for use with heated liquid asphalt. MoDOT will provide electrician, electrical power, wiring, etc. to pump. Pump piping to be arranged by MoDOT. Pump and motor shall be com-



pletely weatherproof and designed for outdoor use. Pump shall carry manufacturers standard warranty and be designed for use with heated liquid asphalt.

- External mounted tank level gauge with high level audible alarm shall be provided.
- Five (5) complete parts, service, and instruction manuals to be included for tank and pump.
- Manufacturers standard warranty for tank, heater, agitator, pump, and all controls shall be in effect for a minimum of one year from date of tank installation. Warranty shall include all parts, labor, freight and any residual costs associated with warranty issues.

Note: Minor deviations to the above specification may be considered and accepted at the sole discretion of this agency.

Equipment shall be installed in a manner that ensures complete safe and functional operation.

All required site preparation work (electrical, concrete pad, and excavating) shall be accomplished by MoDOT prior to delivery.

The contractor shall prepare and submit the outline for site preparation requirements with their bid. The state will rely on the bidder's concrete and electrical requirement submission. The site preparation submissions must consider the manufactures recommendations for proper installation and adhere to requirements to ensure full warranty.

The electrical service specification shall include but may not be limited to the service location in relation to the concrete pad and the necessary connect/disconnect devices.

The concrete pad specification shall include but may not be limited to the size dimension, slope, and the earth compaction.

Training for 6 to 10 MoDOT employees per installation shall be provided.